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JANUARY, 1903.



At Flint, Michigan—\$1.00 a Year.

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ADVERTISING RATES.

All advertisements will be inserted at the rate of 15 cents per line, Nonpareil space, each insertion: 12 lines of Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; 6 times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 9 times, 40 per cent; 12 times, 50 per cent.

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I will send the REVIEW with—

Gleanings, (new).....	(\$1.00).....	\$1.75
American Bee Journal..... (new).....	(1.00).....	1.75
Canadian Bee Journal.....	(1.00).....	1.75
Progressive Bee Keeper.....	(.50).....	1.35
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The Southland Queen.....	(1.00).....	1.75
Ohio Farmer.....	(1.00).....	1.75
Farm Journal (Phila.).....	(.50).....	1.10
Rural New Yorker.....	(1.00).....	1.85
The Century.....	(4.00).....	4.50
Michigan Farmer.....	(1.00).....	1.65
Prairie Farmer.....	(1.00).....	1.75
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Country Gentleman.....	(2.50).....	3.15
Harper's Magazine.....	(4.00).....	4.10
Harper's Weekly.....	(4.00).....	4.20
Yonah's Companion (new).....	(1.75).....	2.35
Cosmopolitan.....	(1.00).....	1.90
Success.....	(1.00).....	1.75

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at its Washington meeting, and, so far as possible, quotations are made according to these rules.

FANCY.—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain, or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," No. 1., dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent.; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

CHICAGO.—We quote as follows:—Fancy white, 16c; No. 1 white, 15c; fancy amber, 13c; No. 1 amber, 12c; fancy dark, 10c; No. 1 dark, 9c; white, extracted, 7 to 8c; amber, 6 to 7c; dark 5 to 6c. Beeswax 30c.

R. A. BURNETT & Co.,
Jan. 7. 163 So. Water St., Chicago, Ills.

KANSAS CITY, MO.—The honey market is very firm, there being only a little coming in. We quote as follows:—Fancy white, 15 to 16c; No. 1 white, 14c; fancy amber, 15c; No. 1 amber, 14c; fancy dark, 13c; No. 1 dark, 12c; white, extracted, 8c; amber, 7c. Beeswax, 30.

WALKER-BREWSTER GROCER CO.,

Nov. 18. 423 Walnut St. Kansas City, Mo.

BUFFALO.—We quote the Buffalo market as very moderately supplied with all kinds of honey. Strictly fancy in lightest supply and selling from 16 to 17c mostly. Lower grades, from 14 to 12c. Moderate amounts can probably be sold at these prices and we advise cleaning up. Very little demand for extracted in Buffalo. Beeswax from 25 to 33c 1/2 to quality.

BATTERSON & CO.

Jan. 6. 159 Michigan St. Buffalo, N. Y.

NEW YORK.—Receipts of comb honey have been more liberal of late, and the demand continues good—not much call for State extracted, but low priced Southern extracted sells freely. We quote as follows:—Fancy white, 15 to 16c; No. 1 white, 14 1/2 to 15c; fancy dark, 13 to 13 1/2c; No. 1 dark, 12 to 13c; white extracted, 6 to 7c; amber, 4 1/2 to 5 1/2c; Beeswax, 27 to 28c.

FRANCIS H. LEGGETT & CO.

Nov. 19. W. Broadway, Franklin & Varick Sta.

NEW YORK.—The demand for comb honey has slackened off—especially for lower grades. Extracted is in good demand. Beeswax scarce. We quote as follows:—Fancy white, 15c; No. 1 white, 14c; fancy amber, 13c; No. 1 amber, 12c; fancy dark, 11 to 12c; No. 1 dark, 11c; white extracted, 7 1/2c; amber, 6 1/2 to 7c; dark, 5 1/2 to 6c. Beeswax, 29 to 30c.

HILDRETH & SEGELKEN,

265 & 267 Greenwich St., Cor. Murray St.

Jan. 7. New York.

CHICAGO.—The demand for comb honey since the first of the year, has been quite brisk, and we look for an active market from now on. Extracted is not moving as readily. We solicit your correspondence on the honey topic. We quote as follows:—Fancy white, 16 to 16 1/2c; No. 1 white, 15 1/2 to 16c; fancy amber, 14c; white extracted, 7 1/2 to 8c; amber, 6 1/2 to 7c.

S. T. FISH & CO.,

Jan. 7. 189 So. Water St., Chicago, Ills.

CINCINNATI.—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5 1/2 to 6 1/2c. White clover and basswood 8 to 9 1/2c; fancy white comb honey, 16 to 17c. Lower grades hard to sell at any price. Beeswax firm at 29 and 30c.

THE FRED W. MUTH CO.

Jan. 7. Cincinnati, Ohio.

RIPE TOMATOES

Two to four weeks before your neighbors have them. Leaflet telling how, and three packets, all different—earliest tomato seed in the market. 25 cents in stamps pay for all.

J. F. MICHAEL, Winchester, Ind.

at R. F. D. No. 6.

Listen! Take my advice and buy your bee supplies of August Weiss; he has tons and tons of the very finest



FOUNDATION

ever made; and he sells it at prices that *defy competition!* Working wax into foundation a specialty. Wax wanted at 26 cents cash, or 28 cents in trade, delivered here. Millions of *Sections*—polished on both sides. Satisfaction guaranteed on a full line of *Supplies*. Send for catalogue and be your own judge. **AUG. WEISS,** Greenville, Wisconsin.

If the REVIEW

Is mentioned when answering an advertisement in its columns a favor is conferred upon both the publisher and the advertiser. It helps the former by raising his journal in the estimation of the advertiser: and it enables the latter to decide as to which advertising mediums are most profitable. If you would help the Review, be sure and say "I saw your advertisement in the Review," when writing to advertisers.

Bee-Keepers

Save money by buying hives, sections, brood frames, extractors, smokers and everything else you need of the

W. T. Falcooper Mfg. Co.,
JAMESTOWN, N. Y.

Our goods are guaranteed of superior quality in every way. Send for our large illustrated catalog and copy of The American Bee-Keeper, a monthly for all bee-keepers; 50c a year, (now in 12th year; H. E. Hill editor.)

W. M. Gerrish, East Notingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a *very thin* base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the Trouble of wiring brood frames can be avoided by using the Van Deusen *wired*. Send for circular; price list, and samples of foundation.

J. VAN DEUSEN,
SPROUT BROOK, N. Y.

Are You One of Them?

use *Root's Goods*. We are their authorized jobbing agents for this State. Send your name for 1903 catalog. Early order discounts 4 per cent to January 1, 1903; 3 per cent to February 15, 1903.

M. H. HUNT & SON, Bell Branch, Mich.

Honey Queens.

Laws' Improved Golden Queens, Laws' Long-Tongued Leather Colored Queens, and Laws' Holy Land Queens.

Laws' queens are doing business in every State in the Union and in many foreign countries. The demand for Laws' queens has doubled any previous season's sales.

Laws' queens and bees are putting up a large share of the honey now sold. Laws' stock is being sold for breeders all over the world. Why? Because it is the best to be had.

Remember! That I have a larger stock than ever; that I can send you a queen any month in the year and guarantee safe delivery; that I have many fine breeders on hand. Price, \$3.00 each. Tested, each, \$1.25; five for \$6.00. Prices reduced after March 15. Send for circular.

W. H. LAWS, Beeville, Texas.

— If you wish the best, low-priced —

TYPE - WRITER.

Write to the editor of the REVIEW. He has an Odell, taken in payment for advertising, and he would be pleased to send descriptive circulars or to correspond with any one thinking of buying such a machine.

Honey Queens From Texas.

Untested queens from these races, 3- and 5-banded Italians, Cyprians, Albinoes and Holylands; bred in their purity from 5 to 20 miles apart. February and March, \$1.00 each, or \$9.00 per doz. All other months, 75c each; \$4.25 for six; or \$3.00 per doz. Tested queens from \$1.50 to \$3.00 each. Breeders, from \$2.00 to \$10.00 each. Nuclei and bees by the pound a specialty. Price list free. WILLIE ATCHLEY, Beeville, Tex.

CAR LOAD BUYERS

Of Bee Hives, and all kinds of bee supplies as well as consumers, will find it to their interest to let me know their needs. I sell to the jobbing trade all over the world. I have financial interests and business contracts with two of the largest factories in the United States, as well as being sole proprietor of a small plant of my own. One of my factories is cutting 12,000,000 feet of lumber this year. I want your business. Address, for a catalogue,

W. H. PUTNAM, River Falls, Wis.

THE

A. I. ROOT CO., 10 VINE ST., PHILADELPHIA, PA BEE-SUPPLIES.

Direct steamboat and railroad lines to all points. We want to save you freight.

Please mention the Review.

HEDDON CASES.

I have over 100 of the Heddon, old-style section cases, that are well-made and painted, have been well cared for, and are practically as good as new that I offer at 15 cts. each.

W. Z. HUTHINSON, Flint, Mich.

YELLOWZONES

Hot Shot For Pain and Fever.

I want to send to every bee keeper's family a full sized 25-cent trial box of *Yellowzones*

FREE

They get right hold of *pain* and *fever*, and will rarely disappoint you in *Rheumatism*, *neuralgia*, *headache*, *coughs*, *colds*, *grip*, *colic*, etc., and are absolutely *without a rival*.

You will be interested in the splendid testimonials of W. Z. Hutchinson, Bro. York and other leading bee keepers who have used them right along for years.

If there are occasional ailments in yourself or family—you hardly want to call a doctor and scarcely know what to do without him—for you are YZ made and to you I want to send this one box *free*. Not a "sample," but a regular 25c box.

It will do you good, send right now.

W. B. House, De Tour, Mich.

Superior Stock.



If the advertising that I have been doing the past three years has not convinced you that the Superior Stock that I have been offering for sale is really superior, then it is the fault of the advertising, for the stock is really all that I claim for it. I have guaranteed safe arrival, safe introduction, purity of mating, and satisfaction to the extent that a queen may be returned inside of two years, and the money will be refunded, together with 50 cts. to pay for the trouble. No other breeder makes any such guarantee. I have sold hundreds of queens under it. I do not know of a single dissatisfied customer, while I have dozens of letters from men telling of increased results from the introduction of this stock, and asking: "Can I get any more queens of you like the one I bought two years ago?"

Although the price of these queens is \$1.50 each, I have never been able to keep up with the orders. Most of my customers wait until spring before sending in their orders, and then have to wait from four to eight weeks. A few are far-sighted enough to send in their orders in the fall or winter, and these get their queens in May or June, in time to be of some service to them the same year. Send \$1.50 now and I'll book your order, and you will get your queen early in the season.

The price of a queen alone is \$1.50, but I sell one queen and the Review one year for only \$2.00. When you send in your renewal to the Review, send another \$1.00 (\$2.00 in all) and your subscription will be put ahead one year and your order booked for a queen.

W. Z. Hutchinson, Flint, Mich.

Victor's Superior Italians

Go by Return Mail, and are Guaranteed to Give Satisfaction, or Money Refunded.

I am ready with the same old true and tried stock of Italian queens and bees as of old. My queen-mothers in yards No. 1 and 2 are serving their fourth year in that capacity, 1900-1903. Their daughters have pleased The A. I. Root Co., W. Z. Hutchinson, O. L. Hershiser, G. M. Doolittle, R. F. Holtermann, F. B. Simpson, and many others prominent in apiculture. In fact, every customer has been pleased as far as I have heard. I COULD FURNISH HUNDREDS OF THE VERY STRONGEST TESTIMONIALS, but space forbids. Practically all the queens that I have sent from these yards were daughters and grand-daughters of the two "Oil Wells," as we often call them. Untested queens, \$1.00 each; select untested, \$1.25 each; tested, \$2.00; breeders, \$3.00 to \$7.00. Send for illustrated price list.

W. O. VICTOR, QUEEN SPECIALIST WHARTON, TEXAS

— If you wish the best, low-priced —

TYPE - WRITER.

Write to the editor of the REVIEW. He has an Odell, taken in payment for advertising, and he would be pleased to send descriptive circulars or to correspond with any one thinking of buying such a machine.

Please mention the Review

— If you are going to —

BUY A BUZZ - SAW,

write to the editor of the REVIEW. He has a new Barnes saw to sell and would be glad to make you happy by telling you the price at which he would sell it.

Please mention the Review.

Make Your Own Hives.

Bee - Keepers

Will save money by using our Foot Power Saw in making their hives, sections and boxes.

Machines on trial.
Send for Catalogue.

W. F. & JNO. BARNES CO.,

384 Ruby St.,

Rockford, Ills.

7 -02 24t





John P. Tull. His Apiary and Bee-Shed.



The Bee-Keepers' Review.

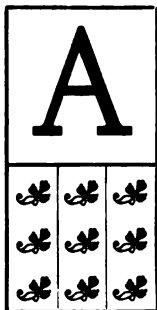
A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers.

\$1.00 A YEAR.

W. Z. HUTCHINSON, Editor and Proprietor.

VOL. XVI. FLINT, MICHIGAN, NOV. 10, 1903. NO. 11.



NEAT APIARY, BEE-
HOUSE AND SHED.
BY JOHN P. TULL.



Friend Hutchinson—
I am sending you per
this mail, two views of
my apiary, taken from
opposite sides of my lot.
The apiary contains 30
hives, and is situated

about 350 feet back of my house; there-
fore we are never annoyed there by the
bees.

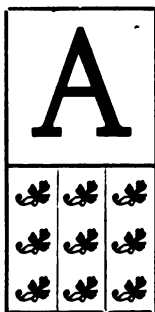
One view shows my bee-house, 8 x 12
feet in size, which is very convenient. It
has three windows and a door, which are
covered with copper screens to keep out
all flies and bees, when same are opened
for ventilation when working inside.
The floor is about 18 inches above the
ground, with benches on two sides of the
building. Under these I can store about
40 supers. Overhead I have racks upon
which to hang brood combs when not in
use. The house is made of German sid-
ing boards, with slate roof, and is painted
a cream color. Connected with the
house is a bee-shed 50 feet long, having a
slate roof, with sides of plain boards.
The back of the same has two doors; and
a board a foot wide is dropped on hinges
the whole length, and there are two open-
ings the same on the front; this gives

plenty of ventilation and light, and
makes a cool place in summer. In the
winter these openings are all closed. This
shed and house also afford great protec-
tion as a wind-break to the other hives
which are on platforms in the open air.
Between the platforms the grass is kept
well cut, and the trees and branches you
see are peach trees. Last year I had a
fine crop of honey all in sections, but
this year was an entire failure on account
of the unfavorable weather. A little
honey is coming in now for winter use,
but will have to feed also to have suf-
ficient stores.

For convenience in keeping a record
of my hives, you will notice they are all
numbered with brass numbers on the
covers in front. If a colony swarms I
simply remove the cover and place it on
the new hive on the old stand, and put
another cover with the old hive on a new
stand. This still keeps all the hives in
their original position.

In the winter the openings in the bee-
shed front are closed at the two upper
openings, by simply pushing up the
boards, which are hinged at the bottom
and are hooked at the top. These boards
or doors also have chains on, which en-
ables me to open them early in the
spring from an inch to the full width by
simply hooking a link of the chain onto
a nail.

Lawndale, Penn., Sept. 23, 1903.



ALL HONEY NOT CONTAMINATED IN A FOUL BROODY COLONY. BY ELMER TODD.



Friend Hutchinson—
Back numbers of the Review have been received and contents partly digested. I am

specially pleased with C. A. Huff's article on foul brood, and have ordered galvanized iron to line a room 10 x 5 x 8, and am going to give the formalin method a thorough test next summer.

I have been experimenting with foul brood with a view to saving all I could with safety from a diseased colony, hoping to eventually save all the combs if possible without having to render them apart, and am very glad if Mr. Huff has solved the problem.

Some of my experiments have turned out well and might be of interest to some of the readers of the Review, so I give the following: While working with diseased colonies my observation has led me to believe that not all the honey in the combs of a diseased colony is of necessity contaminated, and that unfinished sections from such a colony are not very likely to be a source of contagion when placed on a healthy colony, and this summer I concluded to test the matter as fully as my supply of material and time would permit.

In making my annual clean up of foul brood (I perhaps ought to explain here that I am so located that I have a fresh supply brought in every fall and spring by robbers) I left five strong colonies for experimental purposes, those which I knew the foul brood would not injure for honey gathering this season even though they were not freed from the disease. Two of them I had inoculated by using diseased combs which I had tried to renovate, but not by the formalin method. At the opening of the clover-flow, they

had just a few cells of diseased brood, the worst one having probably not over 50 diseased cells in a brood nest of 12 L. frames of brood. They all swarmed on their first case of sections and I prepared hives for the swarms on your plan of furnishing the brood chambers with frames having only narrow starters of foundation, placing a queen-excluding zinc on the frames and then the case of unfinished sections from the parent colony on top of that.

Now, if foul brood is in *all* the honey from a diseased colony, then all those swarms ought to have developed the disease in some of the first brood reared, because from the very start they had free access to the partly filled sections from the diseased parent colonies. They were hived in June, and all through the summer and up to the present time they have not shown the first symptom of the disease.

After allowing the swarms a month's time and seeing no symptoms of the disease, I then gave unfinished sections from diseased colonies of last season to three clean colonies, and up to date they show no diseased brood. If foul brood is in *all* the honey from a diseased colony, to what do these colonies owe their immunity?

In the case of the swarms it (the disease) was not in the sections, nor in the honey sacs of the bees composing the swarm, or else immunity from disease was due to the conditions under which they were hived, which were as follows: A large swarm (during a slow but steady honey flow) hived on start-ers in the brood nest with drawn comb above a queen-excluder. The bees must have stored into the sections all the honey they brought with them, or else used it up in comb-building before there was any brood to feed, but as the field furnished ample supplies, they fed no honey from the sections, but, instead, kept on storing in them.

When using the unfinished sections from last year, they were put on three

different colonies (in tiering up) when they needed surplus room. Of course these colonies had brood nests below, with brood in all stages of development, but the bees apparently carried none of the honey below, or else there were no disease germs in it.

The results of the above experiments convince me that there is not much, if any, danger in using unfinished sections from a slightly diseased colony when placed on a healthy colony during a honey flow. They also indicate that all that is necessary in curing a diseased colony, having a force of bees sufficiently numerous to draw surplus combs in sections and not inclined to cast an early swarm, is to wait for a honey flow, get the bees nicely started in the sections and then remove the contents of the lower story, brushing off all the bees from the combs and replacing the combs with frames furnished with narrow starters of foundation, a queen-excluding zinc between them and their partly drawn and filled sections. The combs of brood can be taken to a new location and given the McEvoy treatment after most of the brood has hatched.

Ten minutes work and the colony is cured, and will keep on storing in the sections the same as a newly hived swarm hived on the Hutchinson plan. I arrived at this conclusion too late in the season to test it, but shall try it at the first opportunity.

York, Neb., Sept. 27, 1903.

[There is no doubt that much of the honey in some hives containing foul brood is free from contamination. Suppose, after the honey season is over and the honey is sealed, germs of foul brood are brought into the hive. They will start the disease in the colony, if they come in contact with any of the brood, but the sealed honey will remain free from the germs so long as it *remains sealed*.

Mr. R. L. Taylor once reported taking a comb of honey from a foul broody colony and giving it to a healthy colony

without its starting foul brood. This comb of honey was taken from the upper story, or else was an outside comb from lower story—I don't remember which.

When honey containing germs of foul brood is brought into a hive and fed to the brood, each larva so fed dies. It settles down into a ropy, gluey mass, and finally dries down into a thin, hard, brown scale upon the lower side of the cell. Honey stored in this cell becomes contaminated, and, if fed to larvae causes them to die with foul brood. In this way it gradually spreads in the hive.

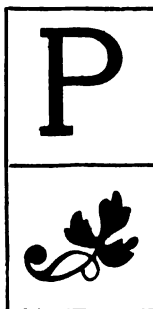
When there is a good honey flow every available cell is filled with honey. The cells containing germs of disease are filled with honey and *sealed up*. All of the diseased honey becomes covered up with new, healthful honey, and is sealed up, and the honey fed to larvae is of this new, healthful honey. Brood is reared successfully in all cells that have never contained foul brood. So completely is the foul brood covered up and out of sight during a good honey flow, that many have been deceived and led to believe that it has been overcome. It is simply covered up, and all of the honey that the bees are handling is new, pure, healthful honey; and honey put into the supers at such times is almost sure to be free from foul brood. This probably is the explanation of why the putting upon healthy colonies of unfinished sections taken from foul broody colonies did not cause foul brood to appear in the colonies upon which they were placed.

Another thing: When honey is coming in freely, the brood is almost sure to be fed upon the freshly gathered honey, and it is not at all likely that honey would be brought down from the sections and fed to the brood.

Mr McEvoy has repeatedly told us that extracting combs from the supers, combs that has contained no brood, might be saved and used with safety, after being cleaned up by the bees; and it is more than likely that in many cases the honey, too, might be used with safety.

I can think of one condition under which foul broody honey might be stored in the sections, and that is as follows: A foul broody colony swarms. In three weeks the young queen begins to lay, and the bees clean out the brood nest as best they can, to give her room to lay, carrying the honey up into the sections. In this case the sections would be liable to contain some foul broody honey.

While I don't believe in taking any foolish, reckless chances with foul brood, I do believe in experimenting with a view to learning to save everything possible.—
ED. REVIEW.]



POINTS OF SUPERIORITY IN THE FOUR-PIECE SECTIONS.
BY C. H. DIBBERN.



Mr. W. Z. Hutchinson.

Dear Sir—You are “mighty right” in your comments on the four-piece sections in last Review. I have used

these sections for many years, but ran short this season, and used several thousands of the one-piece. Now, in handling and scraping the sections and in casing the honey, I can see the difference. True, it takes a little longer in putting four pieces together, but that is more than made up in scraping off the propolis, and then in looks they are simply “not in it” with the four-piece. Then, too, the one-piece section has a “bad habit” of breaking off the bottom piece, when removing the honey from the hive case.

Friend H., can you refer me to the best factory making the four-piece section in perfect shape? The last lot I had were not good and I want to try another factory.

Milan, Ill., Sept. 26, 1903.

Bee-Keepers' Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

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Flint, Michigan, Nov. 10, 1903

KEEP more bees.



SUCCESS is sometimes spelled a-u-d-a-c-i-t-y.



C. P. DADANT, who will be Secretary of the National Association next year, is too well and favorably known to need any introduction.



THE OFFICERS of the National Association for the ensuing year were exceedingly well chosen, and will, I believe, give entire satisfaction.



JAS. U. HARRIS, the newly elected President of the National Association, is probably as good a parliamentarian as we have in our ranks—perhaps the best.



EDITOR HILL has made a very beautiful and tempting picture from a slab of honey (not the regulation sections), a knife, spoon, glass of milk, and a few slices of bread on a plate. It has appeared in Art and Photography and the American Bee-Keeper, and is the best of anything I have seen in this line.

THE Colorado State Bee-Keepers Association will meet in the Chamber of Commerce Hall at Denver, Nov. 23, 24 and 25.

BRO. YORK has very wisely, so it seems to me, given up the supply trade and will hereafter devote his whole energies to the American Bee Journal.

A MAN sometimes waits until he is "dead sure" before venturing, only to find that some other fellow who has taken a few chances has got there ahead of him.

GEO. W. BRODBECK, the newly elected Secretary of the National Association, is a representative California bee-keeper, well known and popular, and his election is a deserved compliment to the Golden State.

CUBA as a Bee and Honey Country is the subject of a very neat little illustrated pamphlet by the A. I. Root Co., in which both sides of the subject are treated with apparent fairness. I think the book is for free distribution.

JOHN H. RISING, of Gaskell Corners, N. Y., and Miss Mary Louise Smith, of Flemingsville, N. Y., were married October 14th, and they were thoughtful enough to send the Review a copy of the paper giving an account of the beautiful home wedding. May their lives be long and happy.

"THE FLORIDA BRUSH" is a new brush for brushing bees, a sample of which has been sent me by the W. T. Falconer Mfg. Co. It is made of broom corn, something like the Coggsball brush, but longer and more loosely tied. It seems as though it would be a good thing with which to brush off bees.

MR. G. B. LEWIS, of the firm of the G. B. Lewis Co., passed away last June, but no notice was sent out to the bee journals until lately. I did not have the pleasure

of a personal acquaintance with Mr. Lewis, but all agree that he was a man of inestimable character and solid worth.

FOUR-PIECE sections have many friends as is shown by the letters I receive. The one by Mr. Dibbern, given in another column, is a fair sample of them. I believe the time is now ripe for some one to begin the manufacture and sale of four-piece sections—to make a specialty of it and advertise them. If the white poplar is lacking, make them of hard maple.

TELLING TALES out of school is what I may be doing, but Harry Lathrop, of Monroe, Wisconsin, has a small volume of poems in press. The book is being printed on the finest Cameo Plate paper, and embellished with numerous fine half-tone engravings. Yes, the work is being done at the Review office, and full particulars will be given as soon as the book is out.

AUTUMN WEATHER is my favorite. The heat of the summer is past. The sunshine is no longer glaring; instead it is golden and mellow. Vines and trees are laden with a luscious ripeness. Forests are painted with a beauty truly gorgeous. Dead leaves rustle under the feet, and send up their woody odor. A crispness in the air fills one with the joy of living. Autumn brings the fulfilment of hopes and of Nature's promises. 'Tis the crowning season of the year.

MANAGER FRANCE is getting out a report that will throw all other annual reports of this kind in the shade. Instead of simply a dry list of the names of members, it will give the number of colonies with which a member began the season, the number with which he closed the season, how he winters his bees, whether

indoors or out, if he pays taxes on his bees, and if so, how much, and how much honey he has produced this year, and the kind.

E. L. PRATT, otherwise known as "Swarthmore," it seems, was the first to publish a description of introducing virgin queens several days old to nuclei, by caging the queens in the nuclei while the preceding queens were becoming fertile, and the American Bee Keeper was the bee journal to publish the article. The details were not the same as those in the article I copied from Gleanings, but the principle is the same; and the Review begs pardon for not having read more closely.

MR. A. D. D. WOOD, of Lansing, Michigan, has taken in a partner by the name of Brush, and the firm will be known as the Wood-Brush Hive and Box Co., and I expect they will make things hum. They are offering ten per cent. discount on hives bought before Dec. 10th. It will be worth your while to get a price list. I give them this notice here, as their ad. came in too late for the adv. pages, and the announcement of the ten per cent. discount would do them no good in the December issue.

THE NORTHWESTERN CONVENTION, the "convention that stands next to the National," will meet in Chicago Wednesday and Thursday, Dec. 2 and 3, at the club rooms of the Revere House, corner North Clark and Michigan streets. Seventy-five cents per person, per night, for lodging, when two persons occupy the same room. Meals 35 cts. Dr. Miller, N. E. France, E. R. Root, E. T. Abbott, J. Q. Smith, Jas. A. Stone, Huber Root and the editor of the Review have all signified their intention of being present.

QUEENS are often "cooked" on their way to California, and after passing through the Great American Desert, where

the temperature sometimes reaches 118 degrees, I can understand how this can happen. Early or late in the season, not in midsummer, is the time to send queens to California. By the way, there is an opening in the Golden State for a first-class queen breeder. He would receive a liberal patronage, as his queens would not have to pass through the heat of the desert.

THE NATIONAL ASSOCIATION is forging ahead with great leaps and bounds. It now has a membership of nearly 1,600, and before the close of another year will, in all probability, reach the 2,000 mark. Its membership is away ahead of any other similar association in the world. It has done much for bee-keeping, and, as it is growing in power almost daily, it is likely that its usefulness will be greatly increased. All of its officers, with only one or two exceptions, are extensive, practical bee-keepers, and know from experience what bee-keepers need.

ARTHUR C. MILLER writes me that in the case of a queen securing food while caged, the inference is that bees having the proper food came near enough for the queen to "ask" for and obtain it, while in the other case the proper bees did not come near enough, or, if so, were unwilling to "give." The point that he wishes to emphasize is that a bee does not go around holding out her tongue offering food. An outstretched tongue is always a "seeking" or "feeling" tongue. On this point Mr. T. S. Hall, of Jasper, Ga., writes me that he has for years been introducing queens by caging them in a cage containing no food, and he has noticed that the queen extends her tongue through the wire cloth to be fed.

THE TIME for putting bees in the cellar will be here before another issue of the Review is printed. While I would leave them as long as I thought there was a reasonable chance for their having an-

other flight, I don't attach so very much importance to these extra late flights. After the bees have settled down for their winter nap they are consuming very little honey. The matter of two weeks does not use up much honey. The bees may be put into a cellar, and the doors and windows all left open until cold, freezing weather comes. This gives the bees the benefit of the fresh air, if there is any benefit, the same as though out upon their summer stands.

MR. A. I. ROOT spent nearly a week with me, or in my company, while going to the Los Angeles convention. We had a number of long talks together and probably got better acquainted than ever before. Since his return he has said a number of very kind things of the Review and its editor. W. P. Root, the proof reader of Gleanings, has also copied from and complimented the Review, in the department that he conducts in Gleanings, in a way that it has never before been praised. E. R. Root has waxed almost enthusiastic over the work that I have done in the photographic line. Did I not know these good friends as I do I should fear that they were indulging in flattery, but I know that they mean what they say, and I thoroughly appreciate the feelings that have prompted these utterances, and the best I can say is, I will try to deserve them.

FAILING COMPETITION is the worst competition that a man can have. A merchant may be able to withstand the competition of a successful competitor, but the competitor who fails in business, and his goods are sold at a sheriff's sale—that is the kind of competition that cuts the ground from under a competitor. Bee-keepers have that kind of competition to contend with in the shape of the farmer with a few hives of bees who takes his honey to market and sells it for what he can get. Some have said: "You must be a poor bee-keeper if you can't raise

honey as cheaply as the farmer bee-keeper." Let the farmer bee-keeper try to make his living raising honey in this way and marketing it in this manner, and see how he will come out. The facts of the case are that his honey costs him more than he sells it for, only he doesn't know it. It is competition of the failing kind.

MAILING cages for the shipping of queens are not strong enough. Several have reached me the past year in a crushed condition—in some cases the occupants had escaped. Every little while we see items in the journals telling of similar experiences. It was this very thing that caused queens to be thrown out of the mails years ago, and it will cause them to be thrown out again unless it is stopped. The only possible objection there can be to larger, stronger cages is that we may have to pay one cent more postage on each queen we mail, but that is a trifling matter compared to having mailing privileges denied us. Let every dealer provide cages this winter in readiness for the next season's trade, and be sure that they are strong enough to stand the enormous pressure to which they are subjected when the mail bags are corded up several feet in height. One thing more: Don't cover the wire cloth with simply a thin cardboard. Years ago we used a wooden cover nearly $\frac{1}{4}$ of an inch in thickness, and it is a pity such covers were not kept in use. A cover of heavy, tough cardboard would be all right, but some of the paper covers used are very flimsy—might almost as well be left off entirely.

WHY PROSECUTED MEMBERS OF THE NATIONAL SHOULD BEAR A PORTION OF THE EXPENSE OF A SUIT.

A month or two ago, the Review asked why the National Association should not bear the whole of the expense of a suit brought against any of its members. Mr. James Heddon writes why he thinks it ought not to bear the whole expense, and

the reason is worth considering. He says: "A reason that I should give why a prosecuted member of the National Association should be expected to bear at least a portion of the expense of a suit at law, provoked by him, is the same that causes fire insurance companies to insist that the insured shall carry one-third of the risk. Sometimes, some people, like Dean Swift, get awfully quarrelsome, even cranky, if they have a powerful ally to fight all the battles that they can precipitate. It is no doubt well that the prosecuted member should meet a small, cautious part of the expense."

TRY AND REALIZE YOUR HAPPINESS.

Many men are working hard and practicing economy, making the old overcoat do one more winter, looking forward hopefully to the time when fortune may smile on them and they will be happy. No matter how rich they may become, such men will never be any happier than they are right now. The man who is working and saving to buy a home, who has a loving wife by his side and little children clambering over his knees, is drinking the wine of life.

ARTIFICIAL HEAT FOR WINTERING BEES.

In one of my recent trips as inspector of apiaries, I came across a man near St. Clair, a Mr. Richard J. Radike, who has for several years been wintering his bees in an old store-building, keeping them warm with a fire in a coal stove. The number of colonies varied from 25 to 60, the size of the room was about 20 feet square, and a small fire kept burning all the time. There was no attempt to keep the temperature at a certain point, but it hovered around 50 degrees most of the time. For the first year or two it seemed as though the air in the repository was too dry, and a dish of water was finally set upon the stove and this seemed to remedy the difficulty. The bees wintered perfectly, but it always was necessary to set them out early as they became uneasy

as soon as the warm days began to come. Usually they were set out the latter part of March. The building was not even plastered, simply sided up on the outside and ceiled upon the inside. The stove was kept in the same room with the bees.

APPRECIATIVE WORDS.

When one has worked hard for the accomplishment of a worthy object, it is pleasant to know that there has been something accomplished. Every little while there is a line or two in a letter that is quite cheering. For instance, one subscriber writes: "I like the Review because it tells us what to do, and then encourages us to do it." I think the mission of the Review was never described in fewer words. Another writes: "I may say, candidly, with no desire to flatter, that your appeals to 'spread out' have been a great incentive to me. I now have 205 colonies, and expect to increase to 300 another year."

SHORT CUTS AND SIMPLER METHODS.

Most beginners in bee-keeping do a lot of useless work. Useless in one sense, in another it is not. It teaches what to do and what not to, and the latter is fully as important as the former. In the primitive bee-keeping of some years ago, the hiving of the swarms, the putting on of the surplus arrangements, and the taking off of the crop, was about all that was done. Between this and the fussing of the amateur lies the golden mean. Learning how to do things had to come first—now many of us are studying how to avoid doing things.

A bee-keeper had 60 colonies of bees. When it came swarming time, for about six weeks he gave most of his time to working with his bees. He had to be there, or thought he had to, in order to hive swarms and do whatever manipulation was necessary. Last year he sold the bees as they took up so much of his time that he was neglecting his farm. The man who bought them (I might as

well tell who it was that bought them—it was Mr. E. B. Tyrell) worked them for extracted honey, and adopted such short-cut methods that he was able to do the work by being with the bees about one day in seven. The man who sold them was sick of his bargain. He did not suppose bees could be managed with so little work. This illustrates what I am trying to express, viz., that some of us need to learn how to do less work with our bees.

MULTIPLY YOURSELF BY MEANS OF HIRED HELP.

Many a man accomplishes much less than he would did he not insist upon doing everything with his own hands. The time was when I set up the advertisements in the Review, when I "made up" the forms, when I trimmed the paper, addressed the wrappers and wrapped up the papers for the mail. I now do none of these things. I have found it more profitable to show somebody else how to do it, and pay them for doing it. In fact, I have about reached the point where I find it does not pay me to do anything that I can hire done.

If a man "keeps more bees," as I so strongly advocate, he may be obliged to hire help, and he will find it greatly to his advantage to do so if there is any need for it. You can teach a man how to extract honey at least nearly as well as you can do it yourself, and his help will enable you to keep twice as many bees.

The most successful men are those who hire others to help them.

SUPPORTING FRAMES ON NAILS.

Mr. E. B. Tyrell has sawed off the projecting ends of the top bars to his frames, or rather, he makes his frames without the projecting ends, and for a support, he drives a six penny finishing nail into the frame about half an inch below its top. This nail takes the place of the usual wooden projection of the top-bar, and a moment's reflection will show what a meager chance the bees have for gluing

it fast. It seemed to me that the frames would not hang true, that they would swing a little over to one side or the other, but the support is so near the top that this does not occur. Like his hive-cover and bottom-board, Mr. Tyrell has had this style of support in use only one season, but so far he is well pleased with it. I must say that I was delighted with the simplicity and cheapness of these three things, the bottom-boards, the covers and the hive-supports. His frames are simple, plain, all-wood frames, nailed up from stuff cut off the edge of $\frac{7}{8}$ lumber. The top-bars are $\frac{3}{4}$ thick, and the end- and bottom-bars about 5-16. He can step up to a hive, take off the cover and take out a frame, just about as quickly as though it were an empty hive that had never contained bees, and use no tools except those given him by nature—his fingers. There is no prying loose. How anybody could think of going back to Hoffman frames after using this arrangement would be beyond my ken.

A "DIRT-CHEAP" BOTTOM BOARD.

Mr. E. B. Tyrell, of Davison, Michigan, has been using a bottom-board this year that is literally and figuratively "dirt-cheap," in fact, *is* dirt or earth. First, the hive-stand is made of rough, inch lumber sawed into strips about three inches wide, and nailed up so that the stand is the same size as the bottom of the hive. In fact, it is a shallow box, three inches deep, without top or bottom, but the same size as the hive. I said it was three inches deep, but the front piece, the one that comes below the entrance of the hive, is only two inches wide. The stand is placed in position, leveled up, and then filled with earth or sawdust, to within an inch of the top—just level with the top of the piece forming the front. When the hive is set upon the hive-stand the bottoms of the frames come about an inch, or a little more, from the earth below.

At first thought this seems like a very rough, primitive affair, as though simply

using the earth for a bottom-board would not answer, but it is difficult to say *why*. Mr. Tyrrell has used this kind of a bottom-board in one apiary all of the past summer, and he says that he has been unable to discover any objection.

If it is desired to move a colony, simply turn the hive-stand bottom side up, lay a piece of burlap, or wire cloth, over the hive-stand, set the hive upon it and fasten it there, and the hive is ready for moving. The narrow front piece to the stand allows of ventilation, even if several hives are stacked up one above the other.



NO NEED FOR BOTTOM-STARTERS.

In all of my experience I have seen no need for the use of bottom starters in sections. If the upper starter is to lack half an inch of reaching the bottom bar, then a bottom starter may be necessary in order to have the comb well attached to the bottom bar, but if it comes down to within one-eighth of an inch of the bottom, it is well nigh impossible to say, by looking at the section after it is filled, which side up it grew. This has been my experience with thousands and thousands of sections, covering years of experience. The assertion is made that if the foundation is allowed to come down so near the bottom it will sag and buckle from striking the bottom-bar. If one-eighth of an inch is allowed at the bottom, no trouble from this source will arise. Suppose the foundation should stretch enough to strike the bottom-bar, and bend a little out of true, that is no sure sign that the finished comb will be bulged. The cells upon one side may be a little deeper than upon the other, that is, the midrib may not be in the center of the comb throughout its entire length, but the comb will not be bulged even if separators are not used, while, if they are used, it could not occur.

I wish that some of those who think they must use bottom starters would try a few sections filled with foundations as I have instructed.

MORE EXTENDED TESTS ARE NEEDED WITH FORMALIN.

N. E. FRANCE, State Inspector of Apiaries for Wisconsin, in a communication just received, says that he has just returned from a 280-mile trip to the northern part of the State where he went to examine 300 combs that had been fumigated, July 27, with formalin gas, to kill the germs of foul brood, and then bees put upon them. Every comb contained foul brood. He says that the gas does not penetrate the cappings nor the honey, nor kill bees just ready to hatch, but still protected by the cappings.

I see by Gleanings that some failures with formalin have been reported. Let us not be too hasty in throwing it aside. I have recently been talking with Mr. C. A. Huff, and he says that with freshly extracted combs, taken from foul broody colonies, he has been successful in destroying the germs with formalin gas, but he has little faith in its efficacy where the cells are sealed, or where the scales have dried down hard. If we can fumigate the extracting combs and be able to use them it will be something. Of course, I don't know the particulars in regard to the combs that Mr. France writes about, and it would be interesting if he could give them. Bro. France, were they freshly extracted, or were they old and dry? Another thing, how were they fumigated, and how long?

Since the foregoing was put in type, I find the following in the Rocky Mountain Bee Journal:

Last spring the editor of the Journal fumigated a set of foul broody combs with formalin gas. Foul brood was present in all of its stages, except the dried scales. They were placed on a healthy colony, the bees cleaned out the foul matter and raised perfectly healthy brood.



A FEW WORDS ABOUT PYROGRAPHY.

It is truly wonderful that, in the rushing throng of a crowded city, among the thousands and thousands that hurry and skurry hither and thither, two friends

from distant States should chance to meet—but sometimes they do. Walking along the streets of Chicago, I heard some one shout, "Hey! Hey!" I did not suppose any one was shouting to me, but I turned about to see N. E. France standing in the door of a restaurant and beckoning to me. I went in and we had breakfast together. We had scarcely started out after breakfast before we ran up face to face with the genial S. A. Niver, he of York State fame. Nothing would do but we must go up to his office, where himself and son-in-law were manufacturing an improved pyrograph. I presume that most of my readers know something about pyrography, but for fear that some may not I will explain that it is the making of pictures on wood by means of lines made with a heated metal point—usually heated by gas from gasoline. The work is often used in decorating the wood work of rooms or furniture. Mr. Niver and his son-in-law have made a decided improvement over the ordinary pyrograph, in that, near the end of the heated point they have an opening through which the heated gas can escape, and this gas is so hot that it can be used to scorch or brown the surface of the wood. The hot point can be used in making black marks, but the hot gas can give almost any degree of color from a slight brown to black brown. In the hands of a skillful operator, the combined tool can be made to perform wonders—give bold effects or the most delicate shading. We were shown some specimens that were truly pictures. Any one interested can secure further particulars by addressing J. G. Tyssowski & Co., 1111 Schiller Building, Chicago, Ills.

MAKE YOUR OWN HIVES.

There has been a very sharp advance in the price of bee supplies—notably in hives. As a result, if there ever was a time when it might be profitable for some bee-keepers to make their own hives, it is now. Nearly all bee-keepers are located within reach of a planing mill, and at

such a mill the bottom-boards, covers and bodies of hives can certainly be cut out more cheaply than they can be bought of some supply manufacturer—to say nothing of the freight. A bee-hive does not need a lot of fancy fixings. A plain board for both bottom and cover, with cleats at the ends to prevent warping, is all right for a large majority of localities. It is exactly what I should choose for this locality. Some $\frac{3}{8}$ strips sawed from $\frac{3}{4}$ lumber can be tacked around three sides of the bottom board, (on top, at the edges) to raise the hive from the bottom board, and just the plainest kind of a plain joint at the corners of the hive, just as a common box is nailed together, is all right for the body of the hive. A plain rabbet for the frames to hang in is all right here. Such a hive as that can be cut out at any planing mill or may be cut out with a foot power saw, and the veriest tyro can nail it up and paint it.

As for frames, I ask for nothing better, in fact, *prefer* simple all-wood frames, the stuff cut from the edge of a $\frac{3}{4}$ board; the end-bars and bottom-bars being $\frac{3}{8}$ thick and the top bar $\frac{1}{2}$ inch thick, the pieces being nailed together with the right size of cement coated wire nails. Such frames all nailed up ought not to cost over \$1.00 a hundred.

With the prices in view that bee-hives are likely to reach, it will be well for bee-keepers to be rigging up or buying a buzz-saw, building a horse power, putting up a wind mill or buying a gasoline engine. Foot power will answer if there are not too many hives to saw out.

TAKE GOOD CARE OF YOURSELF.

In a newspaper that I picked up the other day, I came across the following:

When a man comes to sixty years of age he then begins to realize on his early investment of good sense in spending the years of young manhood in a right way.

It struck me quite forcibly. While I not yet 60, being in the early 50's, yet I so often meet men of my age who are all broken down—old men before their time.

Every little while some man says to me: "Mr. Hutchinson, I haven't seen you for a dozen years, when I met you at the State fair, and I can't see as you look a day older than you did then." I don't think these men are trying to flatter me; they speak in a surprised way, just as though they meant it, and I think they do. I never felt better, stronger or more full of vigor than at present, and I don't expect to look so very much older in 10 or 15 years more. I expect "to realize on my early investment of good sense in spending the years of young manhood in a right way." I have always lived a temperate, regular life, free from every form of dissipation, and kept my mind in a quiet, cheerful, hopeful state. Nothing can pay a man better, at any time of life, than taking good care of himself. A bicycle, a horse, a threshing machine, a steam engine, a man, how long do they last, if neglected or misused. Take good care of them.

Just a word more: Some may think I have inherited my health and strength. Not so; the opposite is true. As a child I was far from strong. The first 20 years of my life were almost a struggle for health. Only by taking the best of care of myself could I keep well; and I have sometimes thought the rigid discipline through which I passed, so thoroughly drilled me in correct methods of living that they have become fixed habits—greatly to my benefit.

BEE-KEEPERS A HIGH GRADE CLASS OF PEOPLE.

As a rule, all bee-keepers, all those worthy of the name, are an intelligent, law-abiding class, not given to the vices. There must be something about bee-keeping that appeals to a man's moral nature, and thus brings out and develops his better qualities, or else there is something about it that attracts men possessed of those higher natures—perhaps it is both.

Let me give one illustration: Years ago, when H. D. Cutting and myself went

to Detroit to make arrangements for holding the National convention, we had some difficulty in finding a hall without paying what seemed to us almost prohibitive prices; At last we found a hall on Michigan avenue, up in the third story, the price of which seemed within our means—in fact, considering what was asked for other halls, we were not a little at a loss to know why the price was so low, but we asked no questions. After the convention was over and I went to settle the bill for the hall, the size of the price was no longer an enigma. The owner kept a saloon in the lower story under the hall, and, as I paid him, he remarked: "You bee-keepers are a queer set. Only one man has been in here and all he bought was a glass of beer. If I had known what kind of a crowd you were, you never would have got that hall for that money." Across the street from the hall, at the Antidel house, were the headquarters for the bee-keepers. Probably 100 of them stopped there. In one corner of the office was a cigar stand, and its owner was heard to complain that "this was a queer crowd. He had sold them only three cigars and they were all to one man."

Whiskey, tobacco and profanity, do not, as a rule, pass the lips of bee-keepers. They are a clean lot of men, and I am proud of those for whose good I labor.

Hired Help in the Apiary.

By correspondence, conversation and observation I know that many bee-keepers are "keeping more bees." Right on the heels of this move will follow the question of hired help. While on the trip to California, Mr. H. H. Hyde, a bright young man from Texas, sat down beside me and said: "Mr. Hutchinson, you have been advising us to keep more bees, and that advice is all right, but how are we going to get the work done? Shall we hire it done or shall it be done on shares?" I thought I should hire it done—I didn't want any partnership. Just then Mr.

France came over and joined in the discussion. If I remember right, he would hire the help if he could work with it. He agreed with Mr. Hyde that there was nothing like self-interest to make a man do his best. The Hyde Bee Co. owns and manages 1,500 colonies of bees, keeping them in 10 different yards, and it is absolutely necessary that some one aside from the owners do part of the work. Mr. Hyde had found the most desirable plan to furnish everything necessary for running an apiary, keeping a strict account of all expenses, then after the season was over, and the expenses paid, a certain portion, say one-fourth or one-third, of the balance was paid to the worker as his share. It will be seen that it is to the advantage of the worker to keep down expenses, as the greater the balance at the end of the season, the greater will be the share that comes to him.

I know one man in this state who bought 100 colonies of bees last spring for \$300, and turned them over to a young man to manage, giving him one-half the honey as his share. About 5,000 pounds of extracted honey were secured. This was a good investment for the man who bought the bees and the man who did the work was well paid for his labor—receiving pretty big wages.

Mr. Mendelson, out in California, told me that the question of getting competent help was really the most serious and perplexing problem with which he had to deal.

While this question is a serious one, it can't be settled in a bee journal any further than to say that each case must be decided on its merits—what is best for one man may not be so for the next man.

A CHEAP COVER THAT CANNOT WARP, WIND OR SPLIT.

When visiting Mr. E. B. Tyrrell, of Davison, Michigan, recently, I saw a hive cover that was quite novel, and possessed of several desirable features. First, it

was cheap; next, it would not warp nor wind, unless the hive was winding, when it would fit itself to the hive. It is made of two-ply Paroid Roofing Fabric. This material is about $\frac{1}{8}$ of an inch in thickness, black in color and almost as tough as leather. It has no tar about it—in fact, is odorless. The cost is $2\frac{1}{2}$ cts. a square foot. Enough for a hive cover will not cost over five cents. Mr. Tyrrell cuts out a piece as large as the top of the hive, and about two inches longer. To the lower side of each end, where it projects the inch beyond the hive, is nailed a $\frac{1}{8}$ square strip of wood as long as the width of the cover. These strips of wood keep the ends of the cover straight and in place. Across the top, over the cover, equally distant from each other, and from the ends of the cover, are tacked two $\frac{1}{8}$ inch square strips of wood as long as the cover is wide. These strips keep the cover out flat and straight—from sinking down or hollowing in the middle.

Mr. Tyrrell has used these covers one season in one apiary and has two faults to find with them. First, they are so light that the wind will blow them off more readily than it will a wooden cover. After the bees have glued them down they stay on all right, but at first, before they are propolised, there is need for a little weight to keep them on if much of a wind should come up. He had several blow off during the season.

The other, and more serious trouble is that, when the fabric becomes hot, as it does in the middle of a hot day, the surface peels up when it is glued fast to the hive. That is, it peels up when the cover is pulled off when stuck down with propolis. It is proposed to remedy this by pasting or gluing or "painting on" a lining of cotton cloth—perhaps enameled cloth, the same as is used so much to cover the tops of frames. I told Mr. Tyrrell that there was one more fault: "You couldn't sit down on top of a hive" "That's all right," said Mr. Tyrrell, "I don't want any sitting down in my apiary."

The cover is removed very easily. There is no need of any prying with a knife or screw driver. No coming off with a snap on a cool day. The cover rolls back just as easily as a quilt. I must say that I was very favorably impressed with both his cover and his "dirt-cheap" bottom-board. If I were establishing an apiary, I should certainly give both of them a trial. They are a move towards cheapness, simplicity, durability and desirability. If I don't miss my guess, Mr. Tyrrell will yet make his mark in the apicultural world.

WHAT THE NATIONAL ASSOCIATION IS DOING IN COMBATING ADULTERATION.

Several years ago a suit against an adulterator of honey in Chicago was brought by the National Association. While it did not result in conviction, it certainly had a very beneficial effect. Now attention is being turned towards the prosecution of adulterators in Colorado. The Colorado bee-keepers have hustled and secured a State law, and now, with the aid of the National Association, they are going after the adulterators. General Manager France has done a lot of correspondence in the matter and while on his way home from the Los Angeles convention he stopped off at Denver and still further investigated the matter. Mr. France now sends out the following statement:

Mrs. Mary E. Wright,
Colorado Food Commissioner,
Denver, Colorado.

Dear Friend:—

Complaint came to me of adulterated honey on the market of Denver, and as it came from members of the National Bee-Keepers' Association, I, acting General Manager of said Association, have made the following investigations:

1897, April 5, Colorado State Agricultural College Chemist analyzed three samples honey purchased from Denver grocery stores, bearing Frisbee honey label. Each proved to be adulterated.

1897, May 18, samples of honey purchased from grocery shelving in Denver, bearing label of Frisbee Honey, was analyzed and found adulterated.

1899, June 27, three samples purchased by E. R. Root from Denver grocery stores carefully analyzed, each adulterated, 30 to 35 per cent foreign.

1903, Feb. 4, complaint from Colorado Bee-Keepers' Association of the same brand of goods being adulterated and sold upon Denver market, also other places. After a lengthy correspondence with both said Association and the Frisbee Honey Co., I proceeded as follows:

1903, June 26, I ordered Denver Notary Public to summon a City Food Inspector (E. George) to purchase at Thompson's Fruit Store, Denver, three (3) jars honey bearing Frisbee Honey label, J. Charles Frisbee as witness. Said samples were expressed to me by said Notary Public. They have been analyzed by reliable chemists of different states. Every sample found by each chemist to be *pure honey*.

1903, June 27, Reply from Frisbee Co., thanking me for the action I had taken, and hoped I would publish the report in each Denver paper and all the Bee papers in America, and thus put a stop to the unjust complaints about his honey. I so promised, and hereby comply with the same.

1903, July 16, I received notice that there was danger of the samples having been purposely placed there to obtain this report from, and if so I might be led into a snare.

1903, July 18, the then vice-president of the National Bee-Keepers' Association (J. U. Harris) and Colorado State Food Commissioner (Mrs. Wright) went to various Denver grocery stores and purchased samples bearing Frisbee Honey Co. label. A portion of each was saved by the Food Commissioner, and a portion of each sent me, each of which have been carefully tested and found to be adulterated.

1903, Aug. 28, Deputy State Food Commissioner and myself with witnesses purchased from four Denver grocery stores several samples bearing Frisbee Honey Co. label. A portion of each sample was saved by said Food Commissioner and the remainder of each I have had carefully analyzed. All but one sample was adulterated.

ALSO one other sample gathered at the same time, in a tumbler with metal cover, bearing a green, three-leaf clover label, from an Omaha firm. Contents proved to be *nearly all*

glucose, with a small piece of comb honey therein.

It is therefore evident said adulterated honey sold in Denver, Colorado Springs and various cities, is a direct violation of the Colorado Food Laws now existing. Said laws also define what shall be the action of the proper officers in enforcing the same. As General Manager of the National Bee-Keepers' Association, having produced the above evidence, I ask the Colorado Food Commissioner to at once take such action as is necessary to bring to justice the violators of said Colorado law.

This is a copy of same today sent to Colorado Food Commissioner. The National Association has done its duty, and now the proper officers *must* do the rest.

Total costs of above evidence about \$26. or \$27.

Yours truly,
N. E. FRANCE.

EXTRACTED

SELLING CANDIED HONEY.

A Novel and Attractive Method.

One great difficulty in selling extracted honey is its tendency to candy or granulate. This can be overcome to a great extent by the application of heat, but many producers save themselves this trouble and all of the trouble that is likely to come afterwards, by educating their customers to buy honey in the granulated form. A novel method of educating customers in this direction, one that is especially adapted to a retail grocer, is described by Mr. S. T. Pettit, in *Gleanings*. Mr. Pettit says:

During the past winter, Morley supplied a grocer in this town with some candied honey in 60-lb. tins. The grocer, according to instructions, stripped the tins from one lot and placed it in a conspicuous place in a window in his grocery, with the inscription, "Pure Clover Honey," in large letters. Well, in a short time that was gone, then another, for a brisk sale sprang up immediately. In a short time that kind of honey failed to appear in the window. A clerk said to me, "That candied honey interferes with the sale of our comb honey so much that I guess we

won't sell any more that way until we work off some of our comb"

They cut it into square and rather thin pieces so smoothly and neatly that it is a very different article from honey dug out of a pail. Then the customer wisely reasons thus: "That honey in the bottle will cost me about four cents a pound more than that lovely candied honey, and the candied honey will look so nice cut up and served in little square blocks."

Of course, some package other than the old-time tin cans will be resorted to another year.

R. F. Holterman had sold it by the barrel that way in Brantford. He simply placed in a large window, stripped the barrel off, and went ahead.

[This method of selling candied honey is excellent. I have known of the plan of stripping a barrel off from the candied mass, but so far I do not think any one has suggested the plan of stripping a tin can off from the candied honey and selling it in the stores in squares and slices. It is a good scheme, and perhaps some of our bee-keeping friends would do well to paste this in their hats until the time of selling candied honey comes around next winter.—ED.]

SELF-SPACED FRAMES.

Some of the Advantages and Disadvantages— Especially the Latter.

More and more, as I go about the country, do I find people who are not satisfied with self-spaced frames. Not a day passes that some man says, and sometimes several men say; "I don't like those Hoffman frames and I wish I had never got them." Mr. Root's people say that their orders are largely for this style of frame. I think this is largely because the Roots have recommended this style of frame. The great bee-keeping public has confidence in the Roots, and with good reason, and when they push a thing it is usually adopted. I am sincere when I say that, in my opinion, they could do a great good if they would push the plain, all-wood frame. Bee-keepers are quite inclined to follow their leaders. If the leaders advocate the self-spaced frames, it is difficult to get the rank and file to say much against that style; but, to show how

strong an opinion there is against them, I will copy from the American Bee Journal what was said at the Los Angeles convention on this subject. The question was asked: "In producing extracted honey, has the self-spacing frame any advantage over the ordinary hanging frame?" Here is the discussion:

N. A. Kluck—Self-spacing frames have a great many advantages. There is a great deal of difference.

J. M. Hambaugh—I think I am qualified to speak of the advantages and disadvantages of self spacing frames. I have been in the business of inspecting everybody's apiaries in San Diego county, and I think we have about as great varieties as any State in the Union. If you could go with me and see the disadvantages of the different kinds of self-spacing frames, you would everlastingly place condemnation on them. If you want to examine rapidly, and get over a good deal of space in a day, you will almost curse the time you ever saw a self-spacing frame. And it is a great disadvantage when it comes to rapid handling and inspecting of frames throughout the country. If I had my way about it, I would everlastingly do away with self-spacing frames. That has been my experience, and I think that of a good many others. There may be some advantages for the time being, but wait until you want to take the frames out, and get at them rapidly. Then you will find they are a great disadvantage. With the other frames, you will find by placing your fingers right, you can lift them right out. But self-spacing frames you will have to pry out the first ones, until you can lift the frames up and get them out. Otherwise they are very hard to get out.

Mr. Abbott—How about the self-spacing hive, not a frame?

Mr. Hambaugh—I have never had any experience, if you mean hives.

Mr. Abbott—Yes, sir, I mean the body of the hives.

Mr. Williamson—All the experience I have had fails to apply when it comes to a movable frame. For rapid handling, you must have a loose-hanging frame.

Mr. Hyde—I am for a hanging frame, first, last and all the time.

Dr. Miller—There are self-spacing frames and self-spacing frames, and it does not necessarily follow because you found a hive—and you will find them—where the frames are stuck fast, that all self-spacing frames act that way. The only thing is to have a sufficiently small point of contact. Generally you have

that too large. I would like to ask Mr. Hambaugh the smallest point of contact he found between any of those frames.

Mr. Hambaugh—After they were in use a certain length of time I found all of them exceedingly hard to pry apart.

Dr. Miller—If we let any large amount of space come in contact that is bad. But did you find any of them touching at only a single point above and below?

Mr. Hambaugh—No; all touched about half way.

Dr. Miller—If there is only a single point at the top you will find those will be just a delight to handle. You will have no trouble in getting them out. The bees cannot accumulate a lot of propolis there. We ought to have—I have tried hard to get that—we ought to have a spacing-nail that would automatically go in, with a head $\frac{1}{4}$ inch thick. I cannot get them inside of that. I use a heavy common wire nail, and with a guage, drive it in so that it projects $\frac{1}{4}$ inch. A staple would answer the same thing.

Mr. Hambaugh—To one side or another, enough so that they would go past each other.

Mr. Hershiser—Just as fast as I pull these frames out of the hive I go and get a claw-hammer and pull the nails or staples out.

Dr. Miller—Anybody that does not like them—there is no law against pulling them out.

Mr. Abbott—I might say I have been using a hive for more than ten years in which the hive spaces the frames. I pronounced the Hoffman frame a humbug ten years ago, and I actually would not have one if I were manipulating it; but why one should suppose that a frame can not be spaced any other way when it can be accurately spaced with metal is beyond me. The "St. Joe" hive has frames which are spaced in that way, and you may nail your frames and not touch them for ten years, and you will have no trouble to lift any one of them out with ease. That hive has been sold for about 15 years, all over our Western country, and I have heard of no complaint of frames being stuck fast.

Mr. Hambaugh—I did run across a hive of that kind from which it was simply impossible to remove the frames. They had gotten so propolized, and we had so everlastingly much trouble trying to get those frames out and overhauling them, that the owner declared he would do away with them. If that is the "St. Joe" hive, I don't want anything to do with it.

Mr. Abbott—That is not the "St. Joe" hive.

Mr. Hyde—We once bought about 180 hives—I don't know whether they were the "St. Joe" hive or not, but when I wanted to get the frames out I had to move one at a time

J. A. Delano—I think if we used tin right on the end of our hive where the frame is, so that we could slide our frames back and forth, then get a straight top-bar and a straight end-bar, it does not matter what width we take (and not use any spaces of any kind), we will find it will suit all localities better. In our locality, I do not think, of all the plans suggested in this discussion, that any of them would work. They will get gummed up.

Out of eight speakers only one championed the self-spacing frames, two were rather non-committal, and five very vehement in their denunciation of self-spacing. A man with any kind of an eye at all can space frames accurately enough without any self-spacing device, and when it comes to getting frames out, especially after they have been in the hive a few years and are all glued fast, there is no nuisance like a self-spacing frame, that cannot be moved either way, but must be drawn straight up—if you can ever get it loosened.

EXTRACTED HONEY.

How To Make Money In Its Production and Sale.

If there is any man in this country who has made money producing and selling extracted honey, it is J. F. McIntyre, of California. He has followed business methods; and at the Los Angeles convention he read a paper on this subject. To me it was as interesting a paper as there was read. It was brief, but to the point, and dealt with the essential features. Mr. McIntyre's paper is as follows:

To make money producing extracted honey it is necessary—

First, to produce a large quantity of high grade honey; and

Secondly, to sell it for a good price.

In starting out to accomplish these objects the first thing to be considered is

the location, or locations, as it will be necessary to keep more than one apiary if you make very much money. If you can find a good field where you can keep a number of apiaries around your home apiary without overstocking or crowding out other bee-keepers, you are fortunate. I shall not attempt to tell you where to find this "Eldorado," because every field has some drawbacks, and you might not thank me when you find them out. I will, however, name some of the things to be taken into consideration in selecting a field.

The quantity and quality of honey that can be produced, an open field, cost of transportation to market, society, healthfulness of climate, annoying insects, excessive heat in summer, or cold in winter.

Having found your "Eldorado," it is important to start with a hive that you will not regret. I have found nothing better than the 10-frame Langstroth, with an unbound zinc queen-excluder between the super and brood chamber, and a painted duck cloth under the cover. All combs in the brood-chamber should be built from full sheets of foundation.

It is also important to stock your hives with the very best stock of bees to be found in the world. I can only recommend that you buy some queens from every breeder who claims to have superior stock, and breed from that which is best.

A system of management should be adopted that will prevent excessive increase, and keep both the super and brood-chamber full of bees during the honey-flow.

Honey should not be extracted until it is ripe, otherwise it must be evaporated to prevent loss from fermentation. It requires experience to tell when honey is ripe enough to extract. In some seasons, and in damp locations, the nectar from the flowers is very thin, and the honey will often ferment after it is all sealed over; at other times, and in dry locations, it is sometimes thick enough to keep, when the bees commence to seal it over. In most locations it is about right when half sealed.

It is economy to have the best tools to work with. At my Sespe apiary, this season, my daughter Flora, 19 years old, extracted all the honey, 10 tons, as fast as a man could cart it in; but she had an 8-comb extractor driven by water-power to do it with. At an out-apiary it cost me \$3.00 per day to get the same amount of honey extracted with a 6-comb Cowan extractor. Two good honey-carts, carrying 4 supers, or 12 combs of honey, at a load, are necessary to bring the honey in

from the apiary, one cart being loaded in the apiary while the other is extracted in the honey-house.

The capping box should be large enough to hold all the cappings from one extracting, to give time for the cappings to drain dry before the apiary is ready to extract again. Bingham honey-knives, kept clean in cold water, are the best to uncap the honey until we get a power-driven machine that will uncap both sides at one operation.

I use smokers with a 4 inch fire tube.

Plenty of tank room is necessary to give the honey time to settle and become clear and sparkling before it is put into cans and barrels, and to prevent delay in extracting, by having to wait for cans or barrels to put the honey in.

Having a field and apiaries, with machinery to run them, and a good system of management, we will now consider the marketing of the crop.

If the cost of producing a pound of honey is 4 cents, it is easy to see that the man who is obliged to sell all of his honey at 4 cents will soon conclude that bees don't pay and get out of the business. To make money, he must be able to hold his honey until the market price rises, for every cent he makes is in the difference between the cost of production and the price at which he sells. Organization undoubtedly helps to hold up prices. The organization of the California National Honey-Producers' Association, together with a medium crop instead of a full crop, as was expected early in the season, has kept the honey market from going to pieces in California this year; but organized weakness is not strength—it is only a bluff. The Steel Trust has been considered a pretty strong organization, and yet it has not been able to prevent a depreciation of its stock to the extent of over \$300,000,000 in the last few months. Why has this thing happened? Too many of its members had to have money, and steel stock had to be sacrificed to get it.

When the holders of any stock or commodity are financially weak, the price of that stock or commodity is bound to fall; but when they are all strong the price is equally sure to rise.

When a large crop of honey is harvested, the bee-keepers, or a large majority of them, are financially weak, and while they are making sacrifices of their honey to get money the price is bound to rule low; but their honey, when sold, goes into the hands of strong men, and soon the price begins to rise. If you have money to live on, and no debts to pay,

just wait until it gets to the highest price, then sell.

You see how it is: Get a good location, with good working facilities, secure the best of stock, keep enough bees, have the best of hives and implements, and pay attention to the marketing—to the business features. Simple, isn't it? Then why don't you do it that way?

MASTERING MOODS.

Thousands of People, who Never Amount to
Much, Could Do the Work of Giants if
They Could Only Conquer Their Moods.

There is no magazine published in this country that I take more pleasure in recommending than I do "Success." I wish every reader of the Review was a subscriber to that journal. One of the greatest factors in a man's success is the condition of his mind. If he can keep himself cheerful, happy, hopeful, courageous, success is almost surely his. "Success" teaches how this may be done; shows how a man can master those fits of "blues" or anger, or despondency, and become master of himself. The October issue contains such an excellent article on this very subject that I take pleasure in copying it. I am sure that its perusal will help my readers, and, at the same time, give them a little insight into the character of "Success." Here is the article:

Pascal says that "the whole dignity of man is in thought," and that "his whole duty is to think correctly." This is a sweeping statement, and yet every word or act of ours is simply the expression of a thought. Unless we learn to think correctly, therefore, life must be a failure. Instead of being the dignified, happy and beautiful thing that the Creator meant it to be, it will be mean, unhappy, unlovely and unsuccessful.

The very first condition necessary to make life yield all its possibilities is health—that abounding vitality and vigor of mind and body which make living joyous—and health is dependent upon correct thought. Every function, every nerve cell, every organ in the body is

powerfully influenced by the nature of our thoughts. There is no more firmly established scientific principle than that we experience the reaction of our thoughts either in increased strength and vitality, or the opposite.

To have a perfectly healthy body, one must possess a cheerful, healthy, optimistic mind. Love, peace, joy, gladness, kindness, unselfishness, contentment, serenity—these are the mental attributes which, by bringing all the bodily functions into harmony, produce a sound, healthy body. Any one who chooses may externalize these attributes in himself by persistent correct thinking.

"I have seen gleams in the face and eyes of the man," says Carlyle, "that have let you look into a higher country." It is in that "higher country" that we must live continually if we would dominate our moods and attain that peace and serenity which insure health and happiness. It is not an easy matter to conquer wrong thinking. Captious moods, fretfulness, worry, anxiety, fear,—all the little imp of the mind that perpetually seek to draw us from the higher to the lower country can only be overcome by constant watchfulness and the greatest earnestness and persistence.

* * *

Wrong thinking is indicative of weakness; it is, indeed, a species of insanity, for a wrong thinker is continually tearing down and wrecking his own mental and physical structure. The right thinker is the only sane thinker, and he is the happiest as well as the most successful man. He knows better than to keep constantly tripping himself up with the adverse thought which produces destructive conditions.

We all know the disastrous effects of wrong thinking. We know by experience how it cripples us mentally and physically. Physicians are well aware that anger poisons the blood, and that fear, anxiety, fretting and all other inharmonious thoughts seriously interfere with the normal action of all the bodily functions. They are also alive to the fact that anxiety or apprehension of impending disaster, if of long duration, is liable to bring on paralysis. It is an established fact that a mother is not only seriously affected by her own thought, but that it affects her infant to such an extent that the same symptoms and conditions from which the mother suffers are reproduced in the body of the infant. Selfishness, jealousy and envy long indulged in tend to produce serious liver

troubles and certain forms of dyspepsia. Lack of self-control and habitual indulgence in violent passions shatter the nervous system, lessen the will power, and induce grave disorders. Worry is one of the greatest enemies of the human race; it carves its deep furrows wherever it goes; it carries gloom and unhappiness with it; it delays or prevents the processes of digestion and assimilation until the starved brain and nerve cells utter their protest in various kinds of disease, sometimes even in insanity.

Wrong thinking, whatever its nature, leaves indelible scars on mind and body alike. It affects character and material prospects equally. Every time you grumble or find fault; every time you lose your temper; every time you do a mean, contemptible thing, you suffer a loss which cannot be repaired. You lose a certain amount of power, of self-respect and of an uplifting and upbuilding character force. You are conscious of your loss, too, which tends to weaken you still further.

A business man will find that, every time he gets out of sorts, flies into a rage, or "goes all to pieces" when things go wrong, he is not only seriously injuring his health, but is also crippling his business. He is making himself repellent; he is driving away success conditions.

A man who wants to do his best must keep himself in good mental trim. If he would achieve the highest success he must be a correct thinker. He cannot think discord and bring harmonious conditions into his business. His wrong thought will honeycomb and undermine his prospects in life.

* * *

Many a once prosperous man has gone down in financial ruin because he had not learned how to control his thoughts. He gave way to the "blues," he began to worry, fret and find fault with everybody. The fault-finding habit became fixed and continued until he sank into a condition where nothing suited him and nobody could please him. His old employees left him; his customers dropped away; his business began to decline and his creditors to question his financial soundness. There was a general slump in his affairs, and he finally "went to pieces."

We can conquer our moods; we can think correctly; we can be what we will to be; we can work miracles with ourselves by the power of affirmative or creative thought; we can make ourselves magnets to attract the conditions we desire, instead of repellent forces.

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see here and there serene souls who impress us with a sense of power, and of calm, unhesitating assurance, and who travel toward their goal with the rhythmic majesty of the stars. They have learned how to think correctly, they have mastered the secret of successful living.

It is true that this supreme self-control, which enables a man to rise to his highest power, is one of the ultimate lessons of culture, but it is the first step to great achievement and is possible to all.

Some time we shall all learn better than to harbor, even for an instant, any suicidal thought or emotion. We shall no more dream of entertaining thoughts of fear, envy, jealousy, or worrying, fretful or anxious thoughts, than we would of entertaining thieves or murderers in our homes. The time will come when intelligent people will no more indulge in fits of anger, will no more indulge in uncharitable thoughts, feelings of hatred or ill-will, or gloomy, depressing, downward-tending thoughts, than they would take poison into the system.

THE YOUTH'S COMPANION IN 1904.

As the years increase THE YOUTH'S COMPANION endeavors to keep pace with them in all that is wise, beautiful and progressive, and not only to retain but to deserve the honorable and exceptionally high place it holds in the confidence and affections of three generations of readers. The greatest living authors in all branches of literature continue to contribute to it.

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National Bee - Keepers' Association.

Objects of the Association.

To promote and protect the interests of its members.

To prevent the adulteration of honey.

Annual Membership, \$1.00.

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Daughters of Select Imported Italians. Select long-tongued (Moore's), and select, Straight 5-band Queens, bred $3\frac{1}{2}$ miles apart, and mated to select drones. No bees owned within $2\frac{1}{2}$ miles; none impure within 3, and but few within 5 miles. No disease. 30 years' experience. Warranted queens 60c each; tested, \$1.25 each. Discount on large orders.

Contracts with dealers a specialty. Discount after July 1st. Send for circular.

JOHN M. DAVIS, Spring Hill, Tenn.

Paper Cutter For Sale.

A man living near here, and having a small job printing office, has consolidated his office with mine, and is putting in a cylinder press. We both had a paper cutter, and, as we have no use for both of them, one will be sold at a sacrifice. Mine is a 24-inch cutter, and has a new knife for which I paid \$10.00 last spring, yet \$25.00 will take the machine. A photograph and description of the machine will be sent on application. This new man will have no connection whatever with the Review—simply with the job work. The presswork for the Review will be done on the new press.

W. Z. HUTCHINSON, Flint, Mich.

I am advertising for B F. Stratton & Son, music dealers of New York, and taking my pay in

MUSICAL INSTRUMENTS.

I have already bought and paid for in this way a guitar and violin for my girls, a flute for myself, and one or two guitars for some of my subscribers. If you are thinking of buying an instrument of any kind, I should be glad to send you one on trial. If interested, write me for descriptive circular and price list, saying what kind of an instrument you are thinking of getting.

W. Z. HUTCHINSON, Flint, Mich.

Please mention the Review.

THE PARKER PEN has the "LUCKY CURVE"

The "lucky curve" is a curve in the feed-pipe that brings its inner opening out against the inside of the barrel of the pen, and this arrangement allows capillary attraction to suck the ink out of the feed-pipe when the pen end is held uppermost, thus preventing all leakage. At the same time the feed-pipe is kept moist with ink and ready for business.

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When on my way to the Los Angeles convention, I saw Mr. France using a fine fountain pen that worked nicely, and I asked him what kind it was. He said it was a "Parker," made by the Parker Pen Co., of Janesville, Wis. I tried it and was so enthusiastic in my praise, that Chas. Schneider pulled out his pen and asked me to try that. It seemed to work as well as the other and I said: "There must be other good pens as well as the Parker. It is strange that I have never been able to buy one." "Mine is a Parker, too," said Mr. Schneider.

As soon as I reached home I sent for a Parker and have been carrying and using it ever since with the greatest of satisfaction.

There are styles of pens of different prices, from \$1.50 up to \$10.00, depending mostly upon the finish of the handle. My pen cost \$2.00, and, so far as practical use is concerned, is the equal of any.

So pleased am I with this pen that I have made arrangements whereby I can send the Review one year, and one of the \$2.00 pens, for only \$2.50. Safe arrival and satisfaction guaranteed, or money will be refunded.

W. Z. HUTCHINSON,
Flint, Mich.

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The business man who neglects to have good envelopes neatly printed, is neglecting one of those little things that sometimes count for so much. They cost but little more than the ordinary kind.

I will furnish 100 envelopes, of the very finest quality, printed in the style shown upon the opposite page, and 100 sheets of letter paper to match, printed in two colors, and send them, postage paid, for only \$2.00. This will be only two cents for each letter you write, and it will be finer stationery than is often used. The Review one year, and this lot of stationery for only \$2.75. If you wish for larger quantities, there will be a reduction in price in proportion to the size of the order.

W. Z. Hutchinson, Flint, Mich.



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We have a list of reliable land agents to whom we can refer you if you wish. But first let us send you the literature—that will get us acquainted.



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If you subscribe for one or more of these magazines in connection with the Bee Keepers' Review, I can make the following offer:

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W. Z. HUTCHINSON, Flint, Mich. 

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7-1t

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Contracts with dealers a specialty. Discount after July 1st. Send for circular.

JOHN M. DAVIS, Spring Hill, Tenn.

QUEENS!

I wish to say to my old customers that I am prepared to ship three-banded Italian queens promptly, and will guarantee them equal to those I have sent in the past. To those who have not tested my queens, I would say give them a trial beside the long-tongued, red-clover double-breasted strains, and see for yourself where lies the difference, if any. Price 75c each.

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2-03-1f Berclair, Texas.

Please mention the Review

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Go by Return Mail, and are Guaranteed to Give Satisfaction, or Money Refunded.

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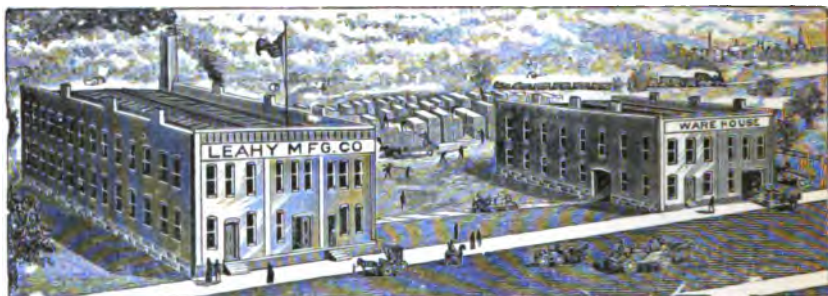
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with prices and samples, free upon application. Beeswax wanted.

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We have made many improvements this year in the manufacture of bee-supplies. The following are some of them: Our hives are made of one grade better lumber than heretofore, and all that are sent out under our new prices will be supplied with separators and nails. The Telescopic has a new bottom board which is a combination of hive stand and bottom board, and is supplied with slatted, tinued separators. The Higginsville Smoker is much improved, larger than heretofore, and better material is used all through. Our Latest Process Foundation has no equal, and our highly polished sections are superb indeed. Send five cents for sample of these two articles, and be convinced. The Daisy Foundation Fastener—well, it is a *daisy* now, sure enough, with a pocket to catch the dripping wax, and a treadle so that it can be worked by the foot.



The Heddon Hive.

Another valuable adjunct to our manufacture is the Heddon Hive. We do not hesitate to say that it is the best all round hive ever put upon the market; and we are pleased to state that we have made arrangements with Mr. Heddon to the end that we can supply these hives; and the right to use them goes with the hives.

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Foundation

By the new *Weed Process* is made in the best manner, upon the best machines, and from the best wax—that free from dirt, pollen, propolis, burnt wax, etc., that decrease its tenacity and make it offensive to the bees. Every inch of foundation is guaranteed to be equal to the sample that will be sent upon application.

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Whether honey should be sent to a distant market, whether sold outright or on commission, whether the home market can be profitably developed, whether the bee keeper should sell the honey himself, or employ some one, the peddling of honey, etc. are all thoroughly discussed in one of the chapters of "ADVANCED BEE CULTURE." Remember, too, that this is only one chapter out of 32.

Price of the book, 50 cts.; the Review one year and the book for \$1.25. Stamps taken, either U. S. or Canadian.

W. Z. HUTCHINSON, Flint, Mich.



Four Per Cent. Discount During the Month of December.

There is every evidence that there will be a heavy demand for goods the coming season; and if you defer placing your order until next February or March, you will not only lose your discount, but may have to wait for the filling of your order some weeks. Indeed, you can afford to borrow money, and get your goods now, thus having them all ready for next season's use.



**Every Month You Wait, it Will Cost
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The styles of goods will be about the same for next season, so there is no use waiting for a new catalog. But remember prices have advanced, owing to the increased price of material; but if you

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Discount**

You will not be paying much more for your goods than last year. A word to the wise is sufficient.



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tive wildness, lifting their beautiful, plume-like tops 150 feet towards the heavens." After leaving the cars I walked five miles along a logging road, lugging my big camera with me, ate with the hands at their shanty (and it was pretty good fare, too), slept with the "boss" in his bunk, and the next morning started through the woods for a small lake, about two miles away,

the clear water—so clear that I see the bottom at a depth that makes me feel uncomfortable to think that over such deep water. On all sides towered the massive walls of dark pines. The morning sun was dawning away the wreaths of white mist still lingered in their tops. Beautiful water lilies, white and yellow, with their purity and freshness, floated



HOME OF S. D. CHAPMAN, Mancelona, Mich.

Years ago Mr. Chapman had fine crops of honey from basswood. When this was lumbered there was scarcely anything left to produce honey, as the country was nearly all forest, and he seriously contemplated abandoning bee culture. Finally lumbermen began cutting off the hard timber and this left the land so nearly unoccupied that red raspberries sprang up and changed the location to one of the best for bee keeping.

along the banks of which the men told me I would find the finest growth of pine. It had rained during the night, and my trousers and shoes were wet through long before I reached the lake—but an enthusiast does not stop for such trifles as that. I loosed the best

great profusion on the surface of water. As I rounded a little point a red deer, standing knee-deep in water eating lily pads, gave one frightened look, three magnificent bounds, and disappeared in the pines. Over all was stillness, the only sound the lowest be felt.